LİMAK ÇİMENTO SANAYİ VE TİCARET A.Ş. - Climate Change 2022

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

Limak Group of Companies entered into the cement sector when it took over Siirt Kurtalan Cement Plant in 2000. It acquired Ergani and Gaziantep Cement Plants in 2006 through asset sale from the Savings Deposit Insurance Fund (SDIF), and Urfa Cement Plant in 2007. Group has completed investments in Bitlis in 2008 and in Mardin-Derik in 2009. At the end of 2010, the market share of Limak reached 7% in Turkey. In 2011, Group took over 4 cement plants located in Ankara, Balıkesir, Trakya & Ambarlı and 12 ready-mixed concrete facilities from Set-Italcementi, and market share reached to 11%. By the completion of modernizations studies in factories, the clinker and the cement capacities of the Group have been increased to 8,000 ktons/year and 14,800 ktons/year respectively. Group started a grinding & packaging cement plant investment in March 2015 in Matola port located in Maputo, capital city of Mozambique, which has a capacity of 700.000 tons/year. The plant became operational at the end of 2016 Q4. Group had commissioned the new integrated cement plant in Ankara, Temelli, in Q3 of 2018 which have 1,800 ktons/year cement capacity. The second investment in Africa, which is another grinding & packaging cement plant with ready- mix concrete plant in Abidjan, commercial capital city of Côte d'Ivoire, has a capacity of 1.000.000 tons cement/year and 1.000.000 m3 of ready-mix concrete. The plant was put into operation in 2018 Q4.Furthermore, Group decided to invest in a new integrated cement plant in Kilis with a cement capacity of 2,3 mtons/year which is located in South Anatolia. The plant was put into operation in Q4 of 2019 and started commercial activities in January 2020. Today, Limak Cement Group has the second biggest production capacity in Turkey and has 14 % of domestic market share. Since 2000, the major achievements of Limak Cement over the years are operations and investments continued in 4 different countries, largest Turkish investments in two different Sub-Saharan African countries, ranked 111th among all companies and first in the cement sector according to the Top 500 Industrial Organizations of Turkey researches prepared by İstanbul Chamber of Industry (ISO), received "Best Industrial Investment Made in 2014-2017 Award" in Mozambique, 3 ready-mixed concrete R&D centers with international accreditation certificates, first projects in the Turkish cement sector with the energy efficiency and clean technology funds of the World Bank and European Investment Bank, low NOx emission rotary kilns with calcinators taken into operation for the first time in the Turkish cement sector,first rank among integrated cement factories in Turkey in the low energy consumption listing, according to the Ministry of Energy and Natural Resources data, first integrated cement factory with a GOLD Certificate (2 GOLD and 1 SILVER certificates),full compliance with the Sustainable Growth Objectives published by United Nations, "Most Environment Friendly Firm" in Turkey in 2018 award by the Ministry of Energy and Natural Resources, In Cote d'Ivoire, Limak Africa SA rewarded with the only cement plant to be in the top 10 in the ranking of the most environmentally friendly companies .An Integrated Management System, including the ISO 45001 Occupational Health and Safety Standard, is implemented at all cement factories. The Group has continued to reinforce the significance it attaches to the health and safety of all permanent and subcontractor employees, who are directly or indirectly employed within its organization, with the "zero accident, zero fatality" objective. Limak Cement Group has adopted an Integrated Management System in the group in general, in order to make more effective planning, define common objectives that are measurable and have added value, identify strengths and weaknesses, share correct and incorrect practices over a single platform, minimize unnecessary resource use and increase employee motivation by corporate synergy and common objectives. Studies on compliance with the current versions of ISO 14001 Environment Management System and ISO 9001 Quality Management System, which have been issued in 2015, have also been carried out in the Group in general. Limak Cement Anka Plant, which has been taken into operation in 2018, has received the title of being the first cement factory in Turkey holding an ISO 45001 certificate. Limak Cement Group has an action agenda primarily in 5 fields within the scope of its sustainability activities. These could be classified as CO2 & Environment Protection, Responsible Fuel and Raw Material Use, Employee Safety and Health, Emission Monitoring and Reduction, Local Impact on Soil and Community, Limak Cement Group participated in Limak Holding's sustainability reporting process every year, in compliance with the "Core" option of the GRI Standards developed by Global Reporting Initiative (GRI) and continued its activities within this context.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	Yes	3 years

C0.3

(C0.3) Select the countries/areas in which you operate.

Côte d'Ivoire
Mozambique
Turkey

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

TRY

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-CE0.7

(C-CE0.7) Which part of the concrete value chain does your organization operate in?

Limestone quarrying
Clinker production
Portland cement manufacturing
Blended cement
Alternative 'low CO2' cementitious materials production
Concrete production

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Chief Executive Officer (CEO)	The CEO of Limak Cement Group should have knowledge and responsibilities on sustainability and climate related issues since these concepts should be integrated and taken into consideration in all phases of the management studies as requirement of global mitigation actions. The Sustainability Committee forms and develops the main strategies of the company to keep the sustainability and climate change targets updated and applicable. The CEO should stand over the studies of the Committee and evaluate the existing and future trends regarding current topics such as climate funding, carbon pricing and energy efficiency investments. While planning the financial strategies and future investments of the Group, the acting with the a climate sensitive consideration will provide significant contribution on sustainable development and risk reduction strategies of the company.
Other C-Suite Officer	The CTO is responsible for increasing energy efficiency, using alternative fuels and alternative raw materials, technological investment alternatives for less natural resource consumption, R&D projects for less carbon consumption, efficient use of water resources and alternative fuel studies in our company. Along with these studies, the CTO also takes an active role in environmental sustainability, water and carbon management.
Chief Operating Officer (COO)	It is the responsibility of the COO to ensure environmental, social and financial sustainability, to carry out studies to increase public and stakeholder awareness in the fight against climate change, and to invest in energy efficiency, renewable energy and recycling.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – all meetings	Reviewing and guiding strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding annual budgets Reviewing and guiding business plans Setting performance objectives Monitoring implementation and performance of objectives Overseeing major capital expenditures, acquisitions and divestitures Monitoring and overseeing progress against goals and targets for addressing climate-related issues	<Not Applicable>	The sustainability and climate change issues are reviewed and evaluated durign the weekly meetings. The Sustainability and Climate Change department searches for opportunities and follows the new developments to be able to maintain current operations and new investments in a more sustainable and free of climate related risk ways. There is a significant interest in sustainable manufacturing and reduction of climate related risks subjects in recent years since the devastating results of previous activities conducted with lack of environmental consideration are started to affect our daily lives and nature dramatically. As Limak Cement Group, we have completed, ongoing and planned studies on energy efficient, sustainable and less carbon emission manufacturing methods . Under the leadership of our board , we have decided to carry our studies in international scale by following and implementing most recent developments and participating top organizations actively working on climate related risks and sustainability. Engine energy efficiency studies have been completed at our Bitlis, Derik and Thrace plants. Sustainability projects for 2022 have been determined. In addition, ISO 14064 Carbon Footprint trainings were completed in all our plants in 2021. Feasibility studies for a total of 16 MW SPP projects for our Kurtalan, Şanlıurfa and Ergani plants have been completed and approved by the senior management. Projects are planned to start in 2022. Waste feeding system in our Anka factory and shredder investments in our Trakya factory are planned. Waste-derived fuel will be used in the first quarter of 2022 at our Anka factory. Pre-feasibility studies for the 6MW WHR project in our Trakya factory have been completed. In this way, it is aimed to reduce carbon emissions. The annual CO2 gain from Solar Power Plant projects in our Kurtalan, Şanlıurfa and Ergani plants has been calculated as approximately 16237 tons Co2/year. The annual co2 gain for the 6MW WHR project designed in our Limak Trakya factory is calculated as 6089 tons of co2.

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	As Limak Cement Group, our company has members of the board of directors who are competent on climate-related issues. Within the group, having knowledge of national and international standards and regulations on climate-related issues, having received training and experience in issues such as environmental sustainability, methods for reducing carbon release, efficient use of water resources, generally graduated from environmental engineering or related departments, took part in R&D studies on climate-related issues. In addition, managers who can play a more active role in water management and climate related issues, determination of risks and measures to be taken accordingly, and who can offer faster solutions depending on their experience on climate-related issues are assigned.	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Chief Executive Officer (CEO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	More frequently than quarterly
Other, please specify (Corporate Sustainability and Climate Change Leader)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Sustainability committee	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Other C-Suite Officer, please specify (CTO)	<Not Applicable>	Both assessing and managing climate-related risks and opportunities	<Not Applicable>	As important matters arise
Chief Operating Officer (COO)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	As important matters arise

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

The CEO of Limak Cement Group should have knowledge and responsibilities on sustainability and climate related issues since these concepts should be integrated and taken into consideration in all phases of the management studies as requirement of global mitigation actions. The Sustainability Committee forms and develops the main strategies of the company to keep the sustainability and climate change targets updated and applicable. The CEO should stand over the studies of the Committee and evaluate the existing and future trends regarding current topics such as climate funding, carbon pricing and energy efficiency investments.While planning the financial strategies and future investments of the Group, the acting with the a climate sensitive consideration will provide significant contribution on sustainable development and risk reduction strategies of the company. CEO approves the investment decision of projects (SPP, WHR, RDF, etc.) aimed at reducing carbon emissions.

Corporate Sustainability and Climate Change Leader is main responsible for the implementation of the sustainability policies and troubleshooting of the climate related issues of the Group. The planning and follow-up of the factory based studies and the coordination of the sustainability and climate change responsible charged in each factory are in the responsibility of Corporate Sustainability and Climate Change Leader.The climate related issues should be monitored continuously and the immediate action plans should be prepared to get accurate results in terms of both environmental and financial aspects. Nowadays, climate related issues have reached to a certain level which could affect the financial development strategies and daily operational activities of most of the companies.By considering all these, it is decided to direct connection of Corporate Sustainability and Climate Change Leader to CEO to be able to facilitate and accelerate the evaluation and implementation of the determined development actions. Limak Cement Group has great passion and motivation for the remediation and improvement of climate related issues and company's sustainability perspective. ISO 14064-1: 2018 Carbon Footprint trainings were completed in 2021 at our Limak Cement group factories and our staff were informed about the subject.

The sustainability studies of the Limak Group are managed by the Sustainability Governance Platform which lead by the Limak Group Sustainability Leadership. This Governance Platform determines strategic sustainable growth targets and submit to management for approval, implements the sustainability approach in all business groups and integrates into all business, manages value proposals, corporate reputation and stakeholder communication, provides corporate compliance, KPI, risk, performance and motivation management, manages financial and non-financial assets and corporate information, ensures the release of institutional reports such as the Global Compact Progress Statement Report and establishes the infrastructure required for the monitoring and following up of the sustainability activities. The Sustainability Support Office and Sustainability Committees are the subsidiaries of the Governance Platform to provide support with well-organized responsibility distribution. Sustainability Committee consists of three main committees which are Inclusive Development Committee, Social People and Healthy Planet Committee. The major responsibilities of those committees are performing feasibility studies for the accomplishment of the sustainability goals, monitoring and following up of the sustainability goals and drawing up the progress reports on the goals. The Corporate Sustainability and Climate Change department of the Limak Cement Group established its own Sustainability Committee to contribute to Limak Group Committees with its own sustainability targets and strategies (Stakeholder Engagement, Supply Chain Management, Occupational Health & Safety Management, Emission Control & Climate Change, Water & Energy Efficiency, Biodiversity, Zero Waste, Alternative Raw Material & Fuel) Corporate Sustainability and Climate Change Leader is the key responsible for the coordination and implementation of the sustainability goals and remediation of climate-related issues.

The CTO is responsible for increasing energy efficiency, using alternative fuels and alternative raw materials, technological investment alternatives for less natural resource consumption, R&D projects for less carbon consumption, efficient use of water resources and alternative fuel studies in our company. Along with these studies, the CTO also takes an active role in environmental sustainability, water and carbon management.

It is the responsibility of the COO to ensure environmental, social and financial sustainability, to carry out studies to increase public and stakeholder awareness in the fight against climate change, and to invest in energy efficiency, renewable energy and recycling.

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	For the reduction of climate related risks and sustainable development, Limak Cement Group set rigid targets to achieve sustainability KPIs. By the contribution of all the departments but mostly under the focus of Sustainability and Climate Change Department, technical center and R&D are studying on several projects such as alternative fuel and raw material usage, plans to reintroduce nature the decrease in raw material utilization and clean or reneable energy production. The aim of those studies is rising awareness for sustainability and climate related risk topics in all units of the Group together with the financial concerns. These studies could be supported with monetary and non-monetary rewards to increase the motivation of project attendees and spread the sustainability consciousness to all bodies of the Group.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Chief Executive Officer (CEO)	Non-monetary reward	Emissions reduction target	Ensuring the implementation of the KPIs and operational performance indicators is the under the responsibility of CEO. The basic attempts to achieve the sustainable and financial development goals such as decreasing fossil fuel, energy and raw material consumptions and increasing the alternative fuel usage should be reviewed and projected by the corporate team and the CEO. These attempts will directly affect the greenhouse gas emissions so it is essentially important in scope of climate-related issues. The investments for climate related risks and opportunities should be projected both Management and Sustainability Committee under the control of CEO.

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other, please specify (Corporate Sustainability and Climate Change Leader)	Non-monetary reward	Emissions reduction project Emissions reduction target Energy reduction project Energy reduction target Efficiency project Efficiency target Company performance against a climate-related sustainability index	Corporate Sustainability and Climate Change Leader is main responsible for the implementation of the sustainability policies and improvement of the climate-related issues of the company. The planning and follow-up of the factory-based studies and the coordination of the sustainability and climate change responsible of each factory are in the responsibility of Corporate Sustainability and Climate Change Leader.
Other, please specify (R&D and Central Technical Organization)	Non-monetary reward	Emissions reduction project Emissions reduction target Energy reduction project	Apart from the product quality control laboratories, there is a central cement laboratory used for the R&D studies within the scope of Limak Cement Group. Together with the special experiments such as analysis and optimization of alternative materials, waste analysis, burnability analysis, there are some other on-going studies for alternative raw material usage, carbon dioxide decreases to be able to participate in low carbon road map. A new type of cement named as Limak CEM PLUS+ has already been developed to achieve low carbon footprint target of the Group. This product has been patented and released to market as a low carbon cement type. Also, a study was conducted for the use of fly ash, bottom ash and synthetic plaster coming from thermal energy plants in cement production following an effective quality and product management period. As a first manufacturer in both Turkey and European Union countries, two new cement products coded as CCBA 42,5 R and CCBA 32,5 N (Cement with Coal Bottom Ash –CCBA) has taken European Assessment Documentation (ETA) from European Organization for Technical Assessment (EOTA) in 2019.
Other, please specify (Process Operation Director)	Non-monetary reward	Emissions reduction project Emissions reduction target Efficiency target	Within the scope of emission reductions studies, Process Operation Director and facility managers should follow the defined KPIs. Sustainability risks and opportunities could be defined by following the process inputs/outputs systematically. The attempts like reduction of energy consumption, the use of fossil fuels, increasing the use of alternative fuels, decreasing used clinker amount for cement production for elimination of the climate related risks should be achieved by the process team under the control of Process Operation Director.
Other, please specify (Energy Director)	Non-monetary reward	Energy reduction project Energy reduction target	In order to leave a more livable world to future generations and to contribute to a more sustainable environment, we replace the resources we use in energy consumption with renewable ones. According to the 2021 Benchmarking data of the Ministry of Energy and Natural Resources, our Limak Anka Cement Factory ranked first in the "kwh/tonne cement category" among 55 integrated cement factories. In addition, 4 of our factories are in the top 5.Thanks to the investments done since 2008, Limak Cement is Turkey's best performance company in the energy consumption of the sector. Despite this outstanding performance, prioritizing continuous improvement in sustainability, Limak Cement continues to set new goals with innovative studies. Certification processes shall be concluded until 2023 for the plants not in possession of ISO 50001 Energy Management System. (Starting from 2019) 6.8% energy efficiency shall be ensured until 2026. In order to leave a more livable world to future generations and to contribute to a more sustainable environment, we replace the resources we use in energy consumption with renewable ones. According to the 2021 Benchmarking data of the Ministry of Energy and Natural Resources, our Limak Anka Cement Factory ranked first in the "kwh/tonne cement category" among 55 integrated cement factories. In addition, 4 of our factories are in the top 5.Thanks to the investments done since 2008, Limak Cement is Turkey's best performance company in the energy consumption of the sector. Despite this outstanding performance, prioritizing continuous improvement in sustainability, Limak Cement continues to set new goals with innovative studies. Certification processes shall be concluded until 2023 for the plants not in possession of ISO 50001 Energy Management System. (Starting from 2019) 6.8% energy efficiency shall be ensured until 2026.
Other, please specify (Procurement Director)	Non-monetary reward	Environmental criteria included in purchases Supply chain engagement	In order to leave a more livable world to future generations and to contribute to a more sustainable environment, we replace the resources we use in energy consumption with renewable ones. According to the 2021 Benchmarking data of the Ministry of Energy and Natural Resources, our Limak Anka Cement Factory ranked first in the "kwh/tonne cement category" among 55 integrated cement factories. In addition, 4 of our factories are in the top 5 Thanks to the investments done since 2008, Limak Cement is Turkey's best performance company in the energy consumption of the sector. Despite this outstanding performance, prioritizing continuous improvement in sustainability, Limak Cement continues to set new goals with innovative studies. Certification processes shall be concluded until 2023 for the plants not in possession of ISO 50001 Energy Management System. (Starting from 2019) 6.8% energy efficiency shall be ensured until 2026. The suppliers are evaluated according to their environmental impacts of whole operations. They are rated by using "Supplier Evaluation Form" and according their performances, the further procurement strategies are determined with those suppliers. In order to leave a more livable world to future generations and to contribute to a more sustainable environment, we replace the resources we use in energy consumption with renewable ones. According to the 2021 Benchmarking data of the Ministry of Energy and Natural Resources, our Limak Anka Cement Factory ranked first in the "kwh/tonne cement category" among 55 integrated cement factories. In addition, 4 of our factories are in the top 5 Thanks to the investments done since 2008, Limak Cement is Turkey's best performance company in the energy consumption of the sector. Despite this outstanding performance, prioritizing continuous improvement in sustainability, Limak Cement continues to set new goals with innovative studies. Certification processes shall be concluded until 2023 for the plants not in possession of ISO 50001 Energy Management System. (Starting from 2019) 6.8% energy efficiency shall be ensured until 2026. The suppliers are evaluated according to their environmental impacts of whole operations. They are rated by using "Supplier Evaluation Form" and according their performances, the further procurement strategies are determined with those suppliers.
Other, please specify (Mining Department)	Non-monetary reward	Other (please specify) (R&D studies to decrease the fossil fuel and raw material consumptions)	The research for the alternative raw material to decrease the emission and increase the efficiency (The effective grindability raw material to decrease the energy consumption, fossil fuel with high calorific value).
Other, please specify (Corporate Finance and Risk Manager)	Non-monetary reward	Other (please specify) (Funding/Grant Alignment to Climate-Related Objectives)	Risk management includes both strategy and the operational sides. The determined risks are classified according to their severity, possibility and frequency rates and both Management & Sustainability Committee are informed about high level risks for advised alternative solutions and budget approval. The climate change and carbon trading are the major risks groups followed.
Other, please specify (Facility Directors)	Non-monetary reward	Other (please specify) (Implementation of the emissions reduction, energy reduction and efficiency targets)	Within the scope of emission reduction studies, facility managers should follow the defined KPIs to decrease in GHG emissions which is the major reason of climate related issues. All members of the factory are supported with required trainings, meetings etc. to raise awareness on their responsibilities and importance of sustainable development and climate related issues.

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other, please specify (Facility Environment/Sustainability Leaders)	Non-monetary reward	Other (please specify) (Monitoring of the emissions reduction, energy reduction and efficiency targets)	The monitoring of the production activities to ensure the KPIs are followed in all phases of process is major responsibilities of Facility Environment/Sustainability Leaders. The arrangement of the trainings to increase the sustainability and climate change awareness of the factory personnel.
All employees	Monetary reward	Behavior change related indicator	Limak Cement Group has a self-developed application named as LIMBES. It provides online access to HSE forms, entrance and exit control sheets, risk management documents, suggestion and complaint sheets. This application is available for all Limak Cement personnel with defined username and password so it provides convenient communication for all factory activities. We arranged HSE a near miss reporting competition through LIMBES among all blue-collar workers in Limak Anka Cement factory and the worker sharing highest amount of near miss report had a monetary reward. This type of monetary rewarded events could be organized to contribute corporate sustainability targets and climate related issues to be able to increase energy efficiency, decrease raw material consumptions and so on.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	1	3	Together with the current climate related issues, there could be further changes in regulations to limit the CO2 emissions, decrease fossil fuel usage, promote alternative fuel usage and increase the energy efficiency so these could cause in short-term risks if the required pre-studies were not conducted in advance. According to the provisions of the European Green Deal and Paris Agreement, the carbon pricing mechanism will become valid until 2023 so this will cause an economical burden for the importer/exporter companies. Also, climate change could cause unexpected weather conditions like heavy rains, floods, droughts, windstorms etc. and this will create short-term risks for operational activities.
Medium-term	3	5	The increase in CO2 level is one of the major sources of the climate related isses so low carbon economy became initial remediation strategy in worldwide. The formation of a carbon pricing mechanism and board tax (ETS or carbon tax) is accepted as best available technique for near future. These will bring some additional responsibilities to companies both financially and technically. The determination of future strategies according to those new trends will also provide great opportunity to company. The use of alternative fuels and biomass as fuel source is one of the common strategies to lower the carbon release during the operations. The organizations and individuals have started to have more environmental conscious and it will require to have a better Stakeholder Engagement strategy to present their environmental impacts in an understandable way. The raw materials for the clinker production are less available day by day together with increase in manufacturing capacity. The accelerating the research and development studies for alternative raw material will provide great opportunity for the future operations of company.
Long-term	5	10	The use of alternative energy sources such as renewable and clean energy to provide required energy for the clinker & cement manufacturing will become an obligatory in future since the negative effects of the fossil fuel to the environment have already started to be observed and it will continue much more dramatically in time. The participating in global organizations dealing with climate related issues and mitigation development strategies could provide real opportunities for the company to be able to plan their future manufacturing strategies in environmentally friendly way such as decrease clinker factor in cement, increase the use of alternative fuels and energy efficiency.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

The Group defines existing and further risks in line with the criteria indicated in risk management plan of the company. The Sustainability and Climate Change department defines climate related risks by considering the current environmental situation of the affected regions and expected further risks for the Group operation both environmentally and financially. The risk analysis is updated and revaluated in determined period of time. Each department of the Group has weekly meeting with CEO and the major topics could be discussed on those meetings. Also, there are daily executive meetings which enables to discuss ongoing or latest topics with management so new detected risks and existing ones could be evaluated with related departments without any delay.

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered
Direct operations
Upstream
Downstream

Risk management process
Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment
Annually

Time horizon(s) covered
Short-term
Medium-term
Long-term

Description of process
Environmental risk analysis and assessment are performed in order to prevent negative impacts on the environment and society, to reduce them to a minimum level where they cannot be prevented and to ensure that appropriate measures are taken. As a result of these analyses and evaluations, mitigating or completely eliminating activities for the environmental impacts determined are determined as objective and continuously monitored. Related performance data and intensity indicators (per capita consumption) are collected and monitored and evaluated in line with the targets set. Corrective actions are determined with a continuous improvement approach, thus ensuring that measures are taken to eliminate potential negative issues and prevent their recurrence. The company periodically organizes trainings for all its employees on environmental management practices, environmental impact and dimensions, waste management and energy efficient use in order to raise environmental awareness in all areas of activity.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	"GHG Monitoring Reporting Verification" is the only regulation which is directly related with the climate related risks. The requirements of that regulation such as CO2 emissions calculation are provided with annual reports to Ministry of Environment. This report is prepared by the third-party company including audit observations and calculation verifications. The Paris Agreement did not affirmed by the Turkish parliament yet so there is no certain obligations and this report has no financial value for the company but it is an opportunity regarding the further updates on Turkish regulations.
Emerging regulation	Relevant, always included	The potential climate related risks are followed and identified by the Corporate Sustainability and Climate Change Department. Those risks are evaluated together with the Risk Department in Sustainability Committee. ETS and EU Green Deal are the major two emerging regulation within the scope of regulative action of the Turkey. Even though, Turkish Parliament did not confirm the Paris Agreement yet, the GHG emissions of the companies are followed in accordance with GHG Monitoring Reporting Verification" which is the only direct regulation related to climate change. The cement sector will be affected mostly from the carbon tax and other financial changes since it has one of the highest emissions among the other sector so the pre-studies have high importance for further changes. EU Green Deal is another hot agenda for the adjustment of climate related risks in Turkey. There should be some required adjustment strategies to have smooth integration period for further changes.
Technology	Relevant, always included	The technological developments mostly are aimed and presents carbon mitigation opportunities to companies but these technologies require high investment cost most of the cases. The emission reduction could be one of the major duties of the companies in future also due to the financial and legal obligations so the following the further technologies could provide opportunities to avoid from the sanctions. The Limak cement have existing and further strategies within that scope such as alternative fuel usage technologies and new clinker types causing less emission during the manufacturing.
Legal	Relevant, always included	The climate related risks are continuously evaluated and available strategies are implemented to current operations. Since the Turkish parliament did not confirm Paris Agreement, there is no strict obligations within that scope but Ministry conducts some pre-studies which identify potential carbon prices for the Turkey. Those studies are closely monitored by the Sustainability and Climate Change of the Group to be able to conduct the required pre-studies.
Market	Relevant, always included	The one of the major financial risks for the cement sector is carbon pricing. The market prices of the cement could change according to the further regulative applications. The climate related risks could also cause further burdens for the companies to be able to mitigate the environmental impacts. The Sustainability and Climate Change Department review and identify those risks and share with the related department of the Group to be able to evaluate the financial or other aspects of those risks. R&D department, Sales Department and Sustainability department are currently meeting on especially carbon pricing and low carbon strategies.
Reputation	Relevant, always included	The reputation of the Group directly affects the current operations and further investments. A high-quality risk management will be major tool to identify the major factor to be able to affect the reputation of the Group and it will be guideline to remove those factors before occurring. The Stakeholder Management has the highest importance to manage the Group reputation in all aspects. Unfortunately, the climate related issues were started to be perceived by the whole people and they started to react new investments which could add new pollutant sources to the nature. As Limak Cement Group, we are cooperating with professional consultancy firms in addition to our existing own strategies and studies to manage stakeholder processes of our investment ideally. The main purpose of the stakeholder engagement is the proper presentation of our sustainability and climate change strategies before getting reactions. These provide both financial and social benefits for the existing and further operations of the Group.
Acute physical	Relevant, always included	The acute physical risks could be defined as short term risks for our company. The unexpected natural events (floods, draughts, heavy rains, earthquakes, extreme hot weather etc.) are the major risk within that scope. They could cause interruptions for procurement operations of the imported process materials such as fuel, additives and so on. As Limak Cement Group, those issues are defined in risk management studies and the optimum precautions are determined and put in to operation.
Chronic physical	Relevant, always included	The chronic physical risks required detailed review to manage environmental, social and financal aspects of the existing and further investments. The cement factories are using significant amount of water and the water availability will be the one of major issues to be faced in near future so this could be one of the major chronic physical risk for our operation as well as whole humankind. A sustainable water supply or less water usage are our current strategies to get prepared for further issues. The Risk Management Department of the Group also works on detailed chronic physical risks according the current trends of the sector.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Even though Turkey have not confirmed yet, there will be carbon emission limitation within the scope INDCs (Intended Nationally Determined Contributions) of the Paris Climate Agreement and also, the Green Deal Agreement will determine carbon emission limitatations. The exceedence of those limitations will be regulated with a carbon pricing mechanism. Currently, there are two alternative carbon pricing mechanisms which are ETS (Emission Trading System) or Carbon Tax. European Countries are mostly using ETS system. According the State and Trends of Carbon Pricing document of the World Bank, despite on going developments, most carbon prices are low, with almost half of the covered emissions priced at less than US $1 0/tCO2e but the High-Level Commission on Carbon Prices estimated that carbon prices of at least US$40–80/tCO2 by 2020 and US$50–100/tCO2 by 2030 are required to cost-effectively reduce emissions in line with the temperature goals of the Paris Agreement.

Time horizon
Short-term

Likelihood
Very likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
243348348

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The total clinker production amount is 9914285 t CO2/year according to information gathered from Process Department. The CO2 density value of the Group was calculated 852 kg CO2/ t clinker. ETS cap for EU countries are accepted as 766 kg CO2 /t clinker as reference value. The diference between company data and cap value is around 86 kg CO2/t clinker. According to IHS Markit's Global Carbon Index, which is made up of prices from the California Compliance Allowance, RGGI, and European Allowance prices, the current weighted global price on carbon is equivalent to $20.81 USD (shown in the chart below). The World Bank's data comes out with a similar price across its 61 jurisdictions at $20.11 per tonne. By considering all these numbers, the approximate potential financial impact figure is calculated (1 $ = 17.5 TL).

Cost of response to risk

Description of response and explanation of cost calculation

Comment
The carbon pricing mechnism for the Turkey still in phase of development. The whole CO2 density and emission unit costs are taken from the current literature research. The exact number could be available following the conclusion of the meetings on those subjects.

Identifier
Risk 2

Where in the value chain does the risk driver occur?
Downstream

Risk type & Primary climate-related risk driver

Emerging regulation	Other, please specify (Carbon Border Adjusment Mechanism (CBAM))

Primary potential financial impact
Increased direct costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
Within the scope of European Green Deal, CBAM will be an obligation to be affected the importing studies of the companies. The application schedule of the CBAM is envisaged as two phases. During the transition period, which will start in 2023 and end in 2025, importers will not pay board tax but they will only apply the reporting requirements. Importers will pay the price for carbon in the second phase, which will start as of 2026. As an another current topic, the countries that apply or are connected to the EU emissions trading system are exempt from CBAM. Since there is no current carbon pricing mechanism in Turkey, this exemption will not be valid for Turkey under the current circumstances.
According to the first scenario, if Turkey establishes ETS mechanism, the board tax will be calculated by multiplying the importing amount (ton) with price difference between Turkish ETS and EU ETS. As second scenario, if Turkey will not have a ETS mechanism, the board tax will be calculated by multiplying the importing amount (ton) with EU ETS prices.

Time horizon

Medium-term

Likelihood
Very likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
69540000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
According to the estimated numbers acquired from the study conducted by the and Turk Cimento to identify Carbon Border Adjustment Mechanism (CBAM), the responsible company will pay 9.5 € for the per tonnes of clinker (App. 1€ = 18,3 TL). According the information gathered from the related department of the Group, the approximate amount of imported cement to the Europe is 400.000 ton clinker/year. By considering all these numbers, potential financial impacts could be calculated.

Cost of response to risk

Description of response and explanation of cost calculation

Comment
CBAM is an important source of risk for Turkey's exports. The fact that exporting powers such as China, Japan and South Korea, which are competitors of Turkey in the EU market after CBAM, accelerated the climate-compatible transformation, increased the urgency for Turkey. This risk can be turned into an opportunity with a transformation program that will cleanse the sectoral structure from carbon and pollution.

Identifier
Risk 3

Where in the value chain does the risk driver occur?
Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Other, please specify (Natural Disaster impacts of our production)

Primary potential financial impact
Increased indirect (operating) costs

Climate risk type mapped to traditional financial services industry risk classification
<Not Applicable>

Company-specific description
The cement factories could be affected from the natural events such as cyclones, heavy rains, floods, draughts etc. The interruption of the raw material and fuel supply could happen due to such extreme natural events. This could cause operation stoppage which results with direct financial loss for the factory. For instance, there was heavy rain in Trakya Region last years and the floods coming from the quarries was caused stoppage in Tekirdağ Cement Plant since the most of the factory infrastructure was submerged and the raw material supply was interrupted. In our country, which is located in the Mediterranean climate zone due to its geographical location, a large part of our forests are under fire threat, and 60% of the total forest area consists of first and second degree fire sensitive areas. For this reason, forest fires are among the priority issues in our country. We have regions defined as green areas in our factories. There is a high probability of fire in the green areas of our factories, naturally or as a result of carelessness. In the event of a fire, production activities in our factories will cease, and this will cause us to suffer financial losses.
Three scenarios have been determined and these are fire, flood and drought.
For the fire scenario that may occur in our seven integrated factories; the cost of an average of 5 days of downtime when foreseeing the factory downtime due to the fire extinguishing operation and the units and equipment affected by the fire; 39188780,82 TL
The average cost of a 3-day shutdown in order to eliminate the disaster in question for the flood scenario that may occur in our Thrace and Kilis factories and to reactivate the factory; 8995442,62 TL
For the drought scenario that may occur in our Şanlıurfa and Kilis plants, which may experience water stress; It takes an average of 2 weeks for the process of drilling a new water well or connecting to the mains water, and since the operation will be interrupted, average. cost; It was calculated as 3845929.76 TL.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium-low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
520301532

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

The approxiamate hourly cost of the factory was recevied from the process department and the financial loss due to this stoppage was calculated. The average stoppage period was considered as 5 days (App. 120 hours).The amount of total stoppage period was multiplied with the hourly cost and the potential impact figure is calculated.

Cost of response to risk

Description of response and explanation of cost calculation

Comment

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?
Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier
Opp1

Where in the value chain does the opportunity occur?
Direct operations

Opportunity type
Resource efficiency

Primary climate-related opportunity driver
Other, please specify (Use of Alternative Fuel Sources)

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
The use of alternative fuel sources such as RDF and biomass could provide an opportunity to decrease the CO2 emission and cost of fuel supply but it requires a continuous supplier to prevent any interruption in operation. The RDF and biomass manufacturing plants should be popularized in Turkey since the current number of the plants are not feasible for this type of integration. However, this system could be used as optional source for the fuel. As Limak Cement Group, we are using RDF as alternative fuel source one of our factories and it is planned to apply other factories in following years. Also, the current fuel sources are decreasing day by day and it will cause a competitive environment in future so alternative raw material source could provide great opportunity in long term.

Time horizon
Medium-term

Likelihood
Very likely

Magnitude of impact
Medium-high

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
6185619.81

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure
The financial impact is calculated by using the unit price of the RDF in our current factory located in Tekirdağ province of the Turkey.

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
The use of alternative fuels could provide both financial and environmental development opportunity for the Group since the current and further regulations are mostly focus on this type of industrial symbiosises to reduce the waste and emission amount. The cost of the currently used fuels are mostly higher than those alternative fuels.

Comment
The use of alternative fuel should be popularized and encouraged since it is one of the wise sustainable solution to mitigate the cilmate related risks without any loss of energy or source.

Identifier
Opp2

Where in the value chain does the opportunity occur?
Upstream

Opportunity type
Resource efficiency

Primary climate-related opportunity driver

Other, please specify (Use of Alternative Raw Materials)

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
The alternative additive materials usage for less clinker usage to decrease CO2 emission could provide significant opportunity for the Group. The R&D department should follow the international developments on less carbon emitting clinker manufacturing methodologies and decrease in clinker amount for cement manufacturing. The most of the carbon emissions occur in clinker production phase so any mitigation strategy for that operation could provide significant benefit especially against further carbon pricing developments. Also, the current raw materials are decreasing day by day and it will cause a competitive environment in future so alternative raw material source could provide great opportunity in long term.

Time horizon
Medium-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
1318399.24

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation
The use of more sustainable materials during the production phase could provide long term solutions for the companies future strategies. The climate related risks and resource efficiency are inevitable concepts for future operations so creating alternatives and mitigation strategies will provide significant benefits for the lifetime of operations. Between 2017 and 2021, the total amount of alternative raw material usage is 405179,15 tonnes and it provides 405179,15 tonnes savings from natural raw material usage. This also provides 405179,15 m3 saving from storage area. In 2021, the amount of raw material usage is calculated as 190906,15 tonnes.

Comment

Identifier
Opp3

Where in the value chain does the opportunity occur?
Downstream

Opportunity type
Energy source

Primary climate-related opportunity driver
Use of new technologies

Primary potential financial impact
Reduced indirect (operating) costs

Company-specific description
The cement sector has continuous energy demand to maintain its operations and the most of this demand was met by using the fossil fuels in global manner. This causes increase in carbon emission levels together with the increase in manufacturing capacity of the sector so the low carbon emission technologies are getting much more important to decrease the emitted carbon amount. Carbon Capture, Use and Storage (CCUS) is a technique for trapping carbon dioxide emitted from large point sources such as power plants, compressing it, and transporting it to a suitable storage site where it is injected into the ground. This technology has significant potential to help mitigate climate change both in Europe and internationally, particularly in countries with large reserves of fossil fuels and a fast-increasing energy demand. The amine washing process which is the most mature technology does not offer sufficient performance today to capture CO2 after combustion. Various technologies at different maturity and performance levels can be envisaged for the capture of CO2 (eg oxyfuel combustion, refrigerated ammonia technology, adsorptive processes, calcium cycling, etc.). Almost, all climate plans integrate CCUS into the equation, but R&D studies are still needed for these plans to be feasible. As Limak Cement Group, we are following the developments on the CCUS closely and planning the implement most feasible method to systems near future.

Time horizon
Long-term

Likelihood
Likely

Magnitude of impact
Medium

Are you able to provide a potential financial impact figure?
No, we do not have this figure

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)

<Not Applicable>

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Comment

C3. Business Strategy

C3.1

(C3.1) Does your organization's strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, but our strategy has been influenced by climate-related risks and opportunities, and we are developing a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

The transition plan that aligns with a 1.5 °C world transition activities and further strategies are discussed in AGMs together with the participation of Group Climate Change and Sustainability Leader. The potential activities are identified and scheduled together with the managers of other departments such as process, maintenance and R&D. The other climate related risks are also discussed and work plans are formed in AGMs following the review of the CEO. The financial, social and environmental aspects of the risks and opportunities are evaluated and action plans are prepared to be able to remove or mitigate risks before causing any devastating consequences.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization's use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios: IEA APS	Other, please specify (Global)	<Not Applicable>	As Limak Cement Gorup, we used our own data and other sector related data to be able to analyse existing and further risks and opportunities for our operations. Since the carbon emission is the major climate related risk especially for cement sector, Turkey government released Intended Nationally Determined Contributions Report to highlight climate actions, including climate related targets for greenhouse gas emission reductions, policies and measures governments aim to implement in response to climate change and as a contribution to achieve the global targets set out in the Paris Agreement even though the agreement was not signed yet. According to this report, there is a general 21% carbon emission reduction target by 2030 but the sectoral allocations were not defined. The carbon emission values are recorded in each factory of the Group and total number is presented in Sustainability Reports in each year. Regarding the carbon pricing mechanism, since there is no certain price per unit of CO2 emission, the estimated unit prices (around US $10/tCO2e) in World Bank document were accepted for the scenario analysis.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

Our main questions and subjects ; How to reduce harmful gas level during cement manufacturing, adopting new and environmentally friendly technologies and supporting existing projects in this regard, alternative fuels and raw materials,

Results of the climate-related scenario analysis with respect to the focal questions

As Limak Cement R&D team, projects including industrial symbiosis and circular economy-based studies are among our priorities because of the awareness of its importance to ensure sustainability.Responsible use of resources and zero waste approach have gained great importance especially for the cement sector, where raw materials are used intensively and in high quantities.Therefore, as Limak , we have studies and trial production in which we are constantly looking for alternative raw materials with the aim of having a chance to prevent and/or reduce the problem of carbon emissions.Since the increase in greenhouse gas emissions, one of the triggers of the climate crisis, has a negative impact especially on the cement sector, the production of new green products and/or new production technologies that will lead to emission reduction are at the forefront of our R&D and innovation strategies. In our R&D projects, we aim to achieve the circular economy approach, by using the wastes from production of one sector as raw material or secondary raw material for another sector, that is, through industrial symbiosis. Accordingly, using the resources as long as possible by keeping them in the cycle is a model that provides energy savings and reduction of waste. With this awareness, R&D strategies of Limak have been determined to cover industrial symbiosis, circular economy, alternative raw materials, carbon capture and evaluation technologies, industry 4.0 and digital transformation thus sustainability targets have been established.The ultimate goal of Limak within the scope of R&D studies is to ensure and maintain the production of innovative green cement and concrete. While achieving this goal,cooperation with other energy-intensive sectors in order to support the circular economy through industrial symbiosis, cooperation with technology developers on energy efficiency within the scope of production system optimization, and administrative processes carried out with information providers to fully manage digital transformation processes can be listed as the main ways. In 2021, within the scope of Horizon Europe Program, Limak Cement participated in the call of “HORIZON-CL4–2021–TWIN– TRANSITION-01” as a partner in the project named “2GATHERandSTRENGHTEN - Gathering the knowledge to deploy methods, tools, technologies, key examples to strengthen the deliberate development of industrial-urban symbiosis networks”, and although the project proposal passed the threshold limit, it was not entitled to be funded. The ultimate goal of the project was to spread the practices and principles of industrial symbiosis to industries and cities in Europe and Limak would take place in one of the 5 case studies in this project.In order to ensure sustainability within the scope of industrial symbiosis, studies are carried out with the Sustainability Development Association.Concrete waste was purchased as an alternative raw material jointly carried out in our Balıkesir factory.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Together with the increase in climate related risks, implementation of certain mitigation strategies become compulsory in global manner. The carbon pricing mechanism is major short term risk for the cement sector since it will cause extra burden for the cement companies in anyway but the proper design and implementation of this mechanism could provide great opportunity for the fight given against the climate related risks. The R&D studies should be accelerated to decrease the clinker use in cement production since most of the carbon emission occurs during the clinker production phase.
Supply chain and/or value chain	Yes	The supply chain department is also included in alternative fuel research studies due to the significant carbon emission of the fossil fuels. The alternative fuel has started to be used in Tekirdağ Factory of the Group in 2015 and the related projects are completed or ongoing for alternative fuel usage in other factories. The supply chain department required to develop new strategies to be able to procure alternative fuels with most suitable features with lowest price. Feasibility studies are carried out for the use of RDF in our Anka and Balıkesir factories in 2022.
Investment in R&D	Yes	The R&D investments are required to be increased for alternative raw material and fuel researches. The less clinker more additive usage is the major R&D study conducted within the scope of mitigation of climate related risks. The Paris Agreement and European Greeen Deal promotes alternative fuel and raw material usage to be able to decrease emissions. R&D studies have big importance to implement those strategies without any loss in the physical and chemical features of the cement .Studies are conducted to evaluate the usability of volatile ash, bottom ash and synthetic gypsum from thermal power plants by cement producers through an effective quality management process in R&D activities. Two products of Limak Cement enabling the use of bottom ash as additive in the cement were certified with European Assessment Documentation (ETA) by European Organization For Technical Assessment (EOTA) in 2019 as a first in our country and in member states of the European Union. Our Kilis factory has received ETA Certificate.
Operations	Yes	The low carbon emission is required to be considered in all phases of the cement production to be able to mitigate the climate related risks. The replacement of the raw materials and fuel will cause some changes in process but it will be an acceptable change by considering the decrease in emissions.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Revenues Direct costs Indirect costs Capital expenditures Capital allocation Acquisitions and divestments Access to capital	Rapid changes experienced in the last 2 years on economic, social and environmental domains as a result of the recent developments in the agenda of Turkey and the world have showed us that the sustainability dynamics have a structure prone to constant changes. Based on our leadership mission, we have revised our sustainability approach declared in order to act in passion and dedication in sustainability.Limak Group of Companies believes that a sustainable economic development is only feasible with an inclusive approach in case one has environmental and social awareness and on a healthy planet. Due to the increase in climate related risks in our era, together with the financial aspects, environmental aspects of the investments are also taken into consideration during the feasibility studies. The existing factories are redesigned or remediated to be able to emit less pollutants during the whole phases of operations. The alternative raw material and fuel sources are the major strategies focused on to be able to mitigate the current carbon emissions. Turkey is preparing to implement a carbon pricing mechanism in following years as requirements of Paris Climate Agreement and Green Deal and it will cause an obvious burden to the cement sector so the less carbon emission will alleviate this burden if it is properly implemented. The cost of the alternative fuels such as RDF and biomass is less compared to currently used fossil fuel so this could be considered as an opportunity also. The development and implementation of climate change and sustainability strategies provides reputation to the companies during their financial attempts such as grant, loan and credit applications, new project developments and so on.

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?
Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number
Int 1

Year target was set
2011

Target coverage
Business activity

Scope(s)
Scope 1
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Other, please specify ((Metric tons of CO2 per metric tons of clinker))

Base year
2008

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
868

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
46

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
914

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
100

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
100

Target year
2023

Targeted reduction from base year (%)
3.91

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions
3.91

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
852

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
31

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
883

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

Target reference number
Int 2

Year target was set
2008

Target coverage
Business activity

Scope(s)
Scope 2

Scope 2 accounting method
Location-based

Scope 3 category(ies)
<Not Applicable>

Intensity metric
Other, please specify ((Metric tons of CO2 per metric tons of cement))

Base year
2008

Intensity figure in base year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for Scope 2 (metric tons CO2e per unit of activity)
60

Intensity figure in base year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in base year for all selected Scopes (metric tons CO2e per unit of activity)
60

% of total base year emissions in Scope 1 covered by this Scope 1 intensity figure
<Not Applicable>

% of total base year emissions in Scope 2 covered by this Scope 2 intensity figure
100

% of total base year emissions in Scope 3 (in all Scope 3 categories) covered by this Scope 3 intensity figure
<Not Applicable>

% of total base year emissions in all selected Scopes covered by this intensity figure
100

Target year
2023

Targeted reduction from base year (%)
33

Intensity figure in target year for all selected Scopes (metric tons CO2e per unit of activity) [auto-calculated]

% change anticipated in absolute Scope 1+2 emissions
3.91

% change anticipated in absolute Scope 3 emissions
0

Intensity figure in reporting year for Scope 1 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for Scope 2 (metric tons CO2e per unit of activity)
43

Intensity figure in reporting year for Scope 3 (metric tons CO2e per unit of activity)
<Not Applicable>

Intensity figure in reporting year for all selected Scopes (metric tons CO2e per unit of activity)
43

% of target achieved relative to base year [auto-calculated]

Target status in reporting year
Underway

Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years

Target ambition
<Not Applicable>

Please explain target coverage and identify any exclusions

Plan for achieving target, and progress made to the end of the reporting year

List the emissions reduction initiatives which contributed most to achieving this target
<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?
Target(s) to increase low-carbon energy consumption or production

C4.2a

(C4.2a) Provide details of your target(s) to increase low-carbon energy consumption or production.

Target reference number
Low 1

Year target was set
2018

Target coverage
Business activity

Target type: energy carrier
Other, please specify (Alternative Fuel)

Target type: activity
Consumption

Target type: energy source
Low-carbon energy source(s)

Base year
2018

Consumption or production of selected energy carrier in base year (MWh)
4152

% share of low-carbon or renewable energy in base year

Target year
2021

% share of low-carbon or renewable energy in target year

% share of low-carbon or renewable energy in reporting year

% of target achieved relative to base year [auto-calculated]
<Calculated field>

Target status in reporting year
Underway

Is this target part of an emissions target?
Yes, process criteria are followed in the target table.

Is this target part of an overarching initiative?
No, it's not part of an overarching initiative

Please explain target coverage and identify any exclusions
The alternative fuel usage operations were started in Trakya Cement Plant in 2018 with the available suppliers and usage amount was continuously increased to a certain level until 2020. The Group is also projected an alternative fuel usage system to Anka Cement Plant and the site activities will be started in following years. Together with this investment, the alternative fuel usage amount of the Group will reach much more higher levels and it will provide both financial and environmental opportunities surely.

Plan for achieving target, and progress made to the end of the reporting year
Efforts are being made to increase the use of wastes with high thermal value instead of fossil fuels in our Limak cement Thrace factory. RDF use feasibility studies of our Anka factory were completed in 2021 and waste incineration processes will be started in the first quarter of 2022.

List the actions which contributed most to achieving this target
<Not Applicable>

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.
Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*	13	157093
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)
157093

Scope(s) or Scope 3 category(ies) where emissions savings occur
Scope 2 (location-based)

Voluntary/Mandatory
Voluntary

Annual monetary savings (unit currency – as specified in C0.4)
2361155

Investment required (unit currency – as specified in C0.4)
2093862

Payback period
1-3 years

Estimated lifetime of the initiative
>30 years

Comment
Within the scope of efficiency development studies of Group, the modernization studies have been conducted in Sanliurfa, Ergani Plants from 2008 to 2011. The Ankara, Balıkesir and Trakya factories were purchased from Italicement Group in 2011 and the capacity increase and modernization of the existing system were continued until 2015. The investments for the new technology equipment are maintained for the increase energy efficiency and decrease environmental impacts sourced from our operations up to 2019 in these plants. Anka Cement Plant and Kilis Cement Plant equipped with advanced manufacturing technologies put into operation. This new technology equipment provide less emission, less energy consumption and interrupted operation so less maintance cost. Trakya Cement Plant was equipped with alternative fuel usage system and it provides low carbon emission. The above estimated CO2e saving number represents the acquisitions from investments and modernization studies realized in within the body of whole Group from 2008 to 2021. In 2021, energy efficiency studies on asynchronous motors were completed in our Trakya, Bitlis and Derik factories. In this context, compensation system applications have been carried out in low voltage direct starting motors to increase energy efficiency in motors. In this way, energy gain is achieved by creating a decrease of 15-20%. In 2022, the motor energy efficiency application and feasibility study of our Şanlıurfa factory is being carried out.

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Dedicated budget for low-carbon product R&D	The major carbon emission occurs during the clinker production phase so carbon emission reduction could be achieved with the developments in clinker production process. Studies are conducted to evaluate the usability of volatile ash, bottom ash and synthetic gypsum from thermal power plants by cement producers through an effective quality management process in R&D activities. Two products of Limak Cement enabling the use of bottom ash as additive in the cement were certified with European Assessment Documentation (ETA) by European Organization For Technical Assessment (EOTA) in 2019 as a first in our country and in member states of the European Union. Activities and works with bottom ashes of thermal power plants at a close location for Kilis plant have been initiated and ETA certificate has received as a result of these studies.
Dedicated budget for other emissions reduction activities	In 2018, an Alternative Fuel Supply System was put into operation at the Trakya plant, reducing fossil fuel use in clinker production, thus restoring industrial-derived waste. In addition, the decrease in foreign exchange output due to fuel imports was recorded.In 2021, Limak Cement will continue to increase the amount of alternative fuel use by accelerating investments in alternative fuel systems (reducing fossil fuel use). In order to protect natural resources, the use of waste which may be an alternative raw material in clinker production continues effectively in all factories.
Dedicated budget for energy efficiency	In 2020, the plan for the establishment of WHR (Waste Heat Recovery) and RDF (alternative derived fuel) systems in Anka, Balıkesir and Kilis factories will be financed by foreign lenders and feasibility studies are ongoing. WHR project contributes to the production of clean energy within the plant instead of energy purchased by the enterprise and further contributes to reducing the energy produced by fossil fuels outsourced and generated in power plants in the same amount.The carbon reduction of WHR with an installed capacity of 4.5 MW was calculated using the CO2 saving factor of the unit electricity in clean energy production as opposed to the fossil energy determined by UK Department of Environment Food and Rural Affairs (DEFRA). Accordingly, the annual carbon reduction contribution (YKAK) of the enterprise is calculated as 19.316, 88 t CO2 / y. It is assumed that 1 tree absorbs 12 kg of CO 2 per year, and accordingly, CO 2 savings achieved by 4.5 MW of WHR per year is equivalent to CO 2 absorption of approximately 1.6 million trees. The amount of CO 2 savings achieved reinforces steps towards greenhouse gas emission reduction and management of climate change risks. WHR systems reduce fossil fuel-derived energy consumption, contributes to the reduction of sectorial energy density, reduces energy costs and increased profitability, reduces the risk of rising energy prices and improves electricity supply reliability. Also, it stands out as creating opportunities for CO2 trade. In 2021, energy efficiency studies on asynchronous motors were completed in our Trakya, Bitlis and Derik factories. In this context, compensation system applications have been carried out in low voltage direct starting motors to increase energy efficiency in motors. In this way, energy gain is achieved by creating a decrease of 15-20%. In 2022, the motor energy efficiency application and feasibility study of our Şanlıurfa factory is being carried out.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?
Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (ETA Document provided by EOTA)

Type of product(s) or service(s)

Cement and concrete	Other, please specify (A type of cement (CEM PLUS+))

Description of product(s) or service(s)
Thanks to its mineral additive content, Limak CEM PLUS+, which reduces the carbon footprint from the Turkish Patent Institute, and the ETA Certificate provided by EOTA for our cement product range are produced in Balıkesir, Kilis. and Anka factories and high concrete class products. With the CEM Plus(+) product, the clinker usage rate is reduced by 5%. The sales amount of TS EN 197-1:2012 CEM PLUS + 52.5 at Kilis Factory is 453.706 tons, and the total cement sales amount of the factory is 1.457.686 tons. The percentage of the sales amount of CEM PLUS + 52.5% in Kilis Factory is 31.3% and 5.1% throughout the Group.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
14.8

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon
Other, please specify (Approved by Turkish Patent Institute)

Type of product(s) or service(s)

Cement and concrete	Other, please specify (A type of cement (CEM PLUS+))

Description of product(s) or service(s)
The sales amount of TS EN 197-1:2012 CEM PLUS + 42.5 at the Anka Factory is 614,049 tons, and the total cement sales amount of the factory is 1.551.649 tons. The percentage of sales of CEM PLUS + 42.5 at the Anka Factory is 39.6% and 6.9% throughout the Group.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
6.9

Level of aggregation
Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify (ETA Document provided by EOTA)

Type of product(s) or service(s)

Cement and concrete	Other, please specify (A type of cement (CEM PLUS+))

Description of product(s) or service(s)
The sales amount of TS EN 197-1:2012 CEM PLUS + 42.5 at the Balıkesir Factory is 247.721 tons, and the total cement sales amount of the factory is 1.061.237 tons. The percentage of sales of CEM PLUS + 42.5% at the Balıkesir Factory is 23.3% and 2.8% across the Group.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)
No

Methodology used to calculate avoided emissions
<Not Applicable>

Life cycle stage(s) covered for the low-carbon product(s) or services(s)
<Not Applicable>

Functional unit used
<Not Applicable>

Reference product/service or baseline scenario used
<Not Applicable>

Life cycle stage(s) covered for the reference product/service or baseline scenario
<Not Applicable>

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario
<Not Applicable>

Explain your calculation of avoided emissions, including any assumptions
<Not Applicable>

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year
2.8

C-CE4.9

(C-CE4.9) Disclose your organization's best available techniques as a percentage of Portland cement clinker production capacity.

	Total production capacity coverage (%)
4+ cyclone preheating	100
Pre-calciner	73

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?
No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?
No

Name of organization(s) acquired, divested from, or merged with
<Not Applicable>

Details of structural change(s), including completion dates
<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start
January 1 2008

Base year end
December 31 2008

Base year emissions (metric tons CO2e)
1938115

Comment
Total direct emissions for clinker and cement production, mainly limestone calcination and fuels combustion

Scope 2 (location-based)

Base year start
January 1 2008

Base year end
December 31 2008

Base year emissions (metric tons CO2e)
187196

Comment
Total indirect emissions coming from the power consumption. We are consuming power from an interconnected grid, Reference factor the Ministry of Energy and Natural Resources (Turkey)

Scope 2 (market-based)

Base year start
January 1 2008

Base year end
December 31 2008

Base year emissions (metric tons CO2e)
187196

Comment
The location-based result has been used as a proxy since a market-based figure cannot be calculated.

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

IPCC Guidelines for National Greenhouse Gas Inventories, 2006
ISO 14064-1
The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
WBCSD: The Cement CO2 and Energy Protocol

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)
8379530.64

Start date
January 1 2021

End date
December 31 2021

Comment
This value refers to the scope 1 emissions of our organization in 2021.

Past year 1

Gross global Scope 1 emissions (metric tons CO2e)
7376574

Start date
January 1 2020

End date
December 31 2020

Comment
This value refers to the scope 1 emissions of our organization in 2020.

Past year 2

Gross global Scope 1 emissions (metric tons CO2e)
5339004

Start date
January 1 2019

End date
December 31 2019

Comment
This value refers to the scope 1 emissions of our organization in 2019.

Past year 3

Gross global Scope 1 emissions (metric tons CO2e)
6502164

Start date
January 1 2018

End date
December 31 2018

Comment
This value refers to the scope 1 emissions of our organization in 2018.

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based
We are reporting a Scope 2, location-based figure

Scope 2, market-based
We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based
498678

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2021

End date
December 31 2021

Comment
This value refers to the scope 2 emissions of our organization in 2021.

Past year 1

Scope 2, location-based
441436

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2020

End date
December 31 2020

Comment
This value refers to the scope 2 emissions of our organization in 2020.

Past year 2

Scope 2, location-based
353495

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2019

End date
December 31 2019

Comment
This value refers to the scope 2 emissions of our organization in 2019.

Past year 3

Scope 2, location-based
439431

Scope 2, market-based (if applicable)
<Not Applicable>

Start date
January 1 2018

End date
December 31 2018

Comment
This value refers to the scope 2 emissions of our organization in 2018.

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?
No

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Capital goods

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Upstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
184164.27

Emissions calculation methodology
Spend-based method
Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain
By determining the distances to the Factory/Customer, the emission factors are calculated over DEFRA and the kg co2 e value is calculated.
Ref: UK Government GHG Conversion Factors for Company Reporting 2021 (DEFRA)Emission / conversion of indirect emissions associated with Category 3-6 For factors, the values in DEFRA 2021 CONVERSION EXCEL FILES (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021) are used.

Waste generated in operations

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Business travel

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
9.55

Emissions calculation methodology
Spend-based method
Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain
All invoiced flight travels belonging to the Limak Cement group are transferred from the accounting unit, and the flight distances of the relevant areas are determined, and the emission factors are calculated over DEFRA, and the kg co2 e value is calculated.
Ref: UK Government GHG Conversion Factors for Company Reporting 2021 (DEFRA) See DEFRA 2021 CONVERSION EXCEL FILES (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021) for emission / conversion factors for indirect emissions associated with Category 3-6. values are used.
Scope 3 emissions in total : 256,877.78 metric ton co2e

Employee commuting

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
401.49

Emissions calculation methodology
Spend-based method
Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain
By determining the distances to the Factory/Customer, the emission factors are calculated over DEFRA and the kg co2 e value is calculated.
Ref: UK Government GHG Conversion Factors for Company Reporting 2021 (DEFRA)Emission / conversion of indirect emissions associated with Category 3-6 For factors, the values in DEFRA 2021 CONVERSION EXCEL FILES (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021) are used.

Upstream leased assets

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Downstream transportation and distribution

Evaluation status
Relevant, calculated

Emissions in reporting year (metric tons CO2e)
72302.47

Emissions calculation methodology
Spend-based method
Fuel-based method
Distance-based method

Percentage of emissions calculated using data obtained from suppliers or value chain partners

Please explain
By determining the distances to the Factory/Customer, the emission factors are calculated over DEFRA and the kg co2 e value is calculated.
Ref: UK Government GHG Conversion Factors for Company Reporting 2021 (DEFRA)Emission / conversion of indirect emissions associated with Category 3-6 For factors, the values in DEFRA 2021 CONVERSION EXCEL FILES (https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021) are used.

Processing of sold products

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Use of sold products

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

End of life treatment of sold products

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Downstream leased assets

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Franchises

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Investments

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (upstream)

Evaluation status
Relevant, not yet calculated

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Emissions in reporting year (metric tons CO2e)
<Not Applicable>

Emissions calculation methodology
<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners
<Not Applicable>

Please explain

C6.5a

(C6.5a) Disclose or restate your Scope 3 emissions data for previous years.

Past year 1

Start date

End date

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment
Carbon Footprint Category 3 started to be calculated in 2022. Therefore, there is no calculation of previous years.

Past year 2

Start date

End date

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Carbon Footprint Category 3 started to be calculated in 2022. Therefore, there is no calculation of previous years.

Past year 3

Start date

End date

Scope 3: Purchased goods and services (metric tons CO2e)

Scope 3: Capital goods (metric tons CO2e)

Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)

Scope 3: Upstream transportation and distribution (metric tons CO2e)

Scope 3: Waste generated in operations (metric tons CO2e)

Scope 3: Business travel (metric tons CO2e)

Scope 3: Employee commuting (metric tons CO2e)

Scope 3: Upstream leased assets (metric tons CO2e)

Scope 3: Downstream transportation and distribution (metric tons CO2e)

Scope 3: Processing of sold products (metric tons CO2e)

Scope 3: Use of sold products (metric tons CO2e)

Scope 3: End of life treatment of sold products (metric tons CO2e)

Scope 3: Downstream leased assets (metric tons CO2e)

Scope 3: Franchises (metric tons CO2e)

Scope 3: Investments (metric tons CO2e)

Scope 3: Other (upstream) (metric tons CO2e)

Scope 3: Other (downstream) (metric tons CO2e)

Comment

Carbon Footprint Category 3 started to be calculated in 2022. Therefore, there is no calculation of previous years.

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure
0.00243

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)
8878208.64

Metric denominator
unit total revenue

Metric denominator: Unit total
3645818324.86

Scope 2 figure used
Location-based

% change from previous year
64

Direction of change
Decreased

Reason for change
In our Bitlis, Derik and Thrace plants, engine energy efficiency application was carried out. As a result of these applications, the intensity figure decreased.

C-CE6.11

(C-CE6.11) State your organization's Scope 1 and Scope 2 emissions intensities related to cement production activities.

	Gross Scope 1 emissions intensity, metric tons CO2e per metric ton	Net Scope 1 emissions intensity, metric tons CO2e per metric ton	Scope 2, location-based emissions intensity, metric tons CO2e per metric ton
Clinker		0.852	0.031
Cement equivalent		0.703	0.043
Cementitious products		0.703	0.043
Low-CO2 materials			

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?
Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	456064	IPCC Fifth Assessment Report (AR5 – 100 year)
CH4	44.5	IPCC Fifth Assessment Report (AR5 – 100 year)
N2O	6.74	IPCC Fifth Assessment Report (AR5 – 100 year)
HFCs	158.78	IPCC Fifth Assessment Report (AR5 – 100 year)
SF6	7.33	IPCC Fifth Assessment Report (AR5 – 100 year)

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Turkey	8379530.64

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By facility
By activity

C7.3b

(C7.3b) Break down your total gross global Scope 1 emissions by business facility.

Facility	Scope 1 emissions (metric tons CO2e)	Latitude	Longitude
Ergani Cement Plant	679884.64	38.28	39.74
Kurtalan Cement Plant	639819	37.96	41.71
Kilis Cement Plant	1648080	36.8	37.02
Anka Cement Plant	1233649	39.6	32.42
Balıkesir Cement Plant	1004632	39.62	27.88
Trakya Cement Plant	1790230	41.63	27.5
Sanlıurfa Cement Plant	1383236	37.28	38.73

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Direct emissions from stationary combustion	459041.98
Direct emissions from mobile combustion	53.68
Direct process emissions and removals from industrial processes	759422.5
Direct emissions from GHG seepage/leakage formation in anthropogenic systems	166.23

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities		8379530.64	
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Turkey	479468	0
Africa	19210	0

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By facility
By activity

C7.6b

(C7.6b) Break down your total gross global Scope 2 emissions by business facility.

Facility	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Ergani Cement Plant	43994	
Kurtalan Cement Plant	40986	
Kilis Cement Plant	80772	
Anka Cement Plant	74046	
Balıkesir Cement Plant	52107	
Trakya Cement Plant	105880	
Sanlıurfa Cement Plant	66628	
Bitlis Cement Plant	6885	
Derik Cement Plant	7370	
Mozambique Cement Plant	8083	
Ivory Coast Cement Plant	11127	

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
indirect emissions from imported electricity	68668.59	

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	498678		
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (midstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Increased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities		<Not Applicable>		
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	1059997	Increased	13.55	It is due to the increase in cement and clinker production.
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 45% but less than or equal to 50%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	No
Consumption of purchased or acquired steam	No
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	9007433	9007433
Consumption of purchased or acquired electricity	<Not Applicable>			
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>		<Not Applicable>	
Total energy consumption	<Not Applicable>			

C-CE8.2a

(C-CE8.2a) Report your organization's energy consumption totals (excluding feedstocks) for cement production activities in MWh.

	Heating value	Total MWh
Consumption of fuel (excluding feedstocks)	LHV (lower heating value)	9007433
Consumption of purchased or acquired electricity	<Not Applicable>	933962
Consumption of other purchased or acquired energy (heat, steam and/or cooling)	<Not Applicable>	<Not Applicable>
Total energy consumption	<Not Applicable>	

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	No
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	No
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	No

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other biomass

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
0

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment

Coal

Heating value
LHV

Total fuel MWh consumed by the organization
8949037

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
The total energy consumption of petcoke, imported lignite and domestic lignite used in our plants is indicated.

Oil

Heating value
LHV

Total fuel MWh consumed by the organization
6880

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Fuel Oil energy consumption amount used in our factories is stated.

Gas

Heating value
LHV

Total fuel MWh consumed by the organization
1907

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
The amount of natural gas energy consumption used in our factories is stated.

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
LHV

Total fuel MWh consumed by the organization
49608

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
The energy consumption of RDF (Waste Derived Fuel), which is used as an additional fuel in our Thrace plant, is stated.

Total fuel

Heating value
LHV

Total fuel MWh consumed by the organization
9007433

MWh fuel consumed for self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-generation of heat
<Not Applicable>

MWh fuel consumed for self-generation of steam
<Not Applicable>

MWh fuel consumed for self-generation of cooling
<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Comment
Energy consumption has increased due to the increase in cement and clinker production.

C-CE8.2c

(C-CE8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel for cement production activities.

Sustainable biomass

Heating value

Total MWh fuel consumed for cement production activities

MWh fuel consumed at the kiln

MWh fuel consumed for the generation of heat that is not used in the kiln

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Other biomass

Heating value

Total MWh fuel consumed for cement production activities

MWh fuel consumed at the kiln

MWh fuel consumed for the generation of heat that is not used in the kiln

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Other renewable fuels (e.g. renewable hydrogen)

Heating value

Total MWh fuel consumed for cement production activities

MWh fuel consumed at the kiln

MWh fuel consumed for the generation of heat that is not used in the kiln

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Coal

Heating value
LHV

Total MWh fuel consumed for cement production activities
8949037

MWh fuel consumed at the kiln
8949037

MWh fuel consumed for the generation of heat that is not used in the kiln
0

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Oil

Heating value
LHV

Total MWh fuel consumed for cement production activities
6880

MWh fuel consumed at the kiln
0

MWh fuel consumed for the generation of heat that is not used in the kiln
6880

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Gas

Heating value
LHV

Total MWh fuel consumed for cement production activities
0

MWh fuel consumed at the kiln
0

MWh fuel consumed for the generation of heat that is not used in the kiln
0

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value
LHV

Total MWh fuel consumed for cement production activities
49608

MWh fuel consumed at the kiln
49608

MWh fuel consumed for the generation of heat that is not used in the kiln
0

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

Total fuel

Heating value
LHV

Total MWh fuel consumed for cement production activities
8998645

MWh fuel consumed at the kiln
8998645

MWh fuel consumed for the generation of heat that is not used in the kiln
6880

MWh fuel consumed for the self-generation of electricity
<Not Applicable>

MWh fuel consumed for self-cogeneration or self-trigeneration
<Not Applicable>

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity				
Heat	9007433	9007433		
Steam				
Cooling				

C-CE8.2d

(C-CE8.2d) Provide details on the electricity and heat your organization has generated and consumed for cement production activities.

	Total gross generation (MWh) inside the cement sector boundary	Generation that is consumed (MWh) inside the cement sector boundary
Electricity		
Heat	9007433	9007433
Steam		

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area
Turkey

Consumption of electricity (MWh)
933962

Consumption of heat, steam, and cooling (MWh)
0

Total non-fuel energy consumption (MWh) [Auto-calculated]

Is this consumption excluded from your RE100 commitment?
<Not Applicable>

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description
Waste

Metric value
22506

Metric numerator
tonnes RDF /year

Metric denominator (intensity metric only)

% change from previous year
1.03

Direction of change
Increased

Please explain
Limak Cement San. ve Tic. Inc. Within the scope of waste incineration activities in our Thrace branch, 21900 tons of RDF was used in 2021. In 2022, this value is 22506 tons. RDF usage is monitored daily and the increase in 2022 was recorded as 1.03%.

Description
Waste

Metric value
190906.15

Metric numerator
tonnes ARM/year

Metric denominator (intensity metric only)

% change from previous year
51.58

Direction of change
Increased

Please explain
Limak Cement San. ve Tic. Inc. Within the scope of waste incineration activities in our Thrace branch, 98465 tons of ARM was used in 2021. In 2022, this value is 190906.15 tons. ARM usage is monitored daily and the increase in 2022 was recorded as 51.58 %.

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	As Limak Cement R&D team, projects including industrial symbiosis and circular economy-based studies are among our priorities because of the awareness of its importance to ensure sustainability. Responsible use of resources and zero waste approach have gained great importance especially for the cement sector, where raw materials are used intensively and in high quantities. Therefore, as Limak Cement, we have studies and trial production in which we are constantly looking for alternative raw materials with the aim of having a chance to prevent and/or reduce the problem of carbon emissions. Since the increase in greenhouse gas emissions, one of the triggers of the climate crisis, has a negative impact especially on the cement sector, the production of new green products and/or new production technologies that will lead to emission reduction are at the forefront of our R&D and innovation strategies. In our R&D projects, we aim to achieve the circular economy approach, by using the wastes from production of one sector as raw material or secondary raw material for another sector, that is, through industrial symbiosis. In 2021, within the scope of Horizon Europe Program, Limak Cement participated in the call of "HORIZON-CL4–2021– TWIN–TRANSITION-01" as a partner in the project named"2GATHERandSTRENGHTEN-Gathering the knowledge to deploy methods, tools, technologies and key examples to strengthen the deliberate development of industrial-urban symbiosis networks", and although the project proposal passed the threshold limit, it was not entitled to be funded. The ultimate goal of the project was to spread the practices and principles of industrial symbiosis to industries and cities in Europe and Limak Cement would take place in one of the 5 case studies in this project. In current ongoing studies, cooperation is made with governmental institutions, universities and project-based companies in the private sector. For example, in one of these projects, which was carried out jointly with the governmental institution, the evaluation of the waste of the mining sector as a raw material in cement production is being investigated. In cooperation with universities, projects are presented to grant programs such as Horizon Europe, and also Limak takes place as an industrial partner that provides materials in the R&D studies carried out at the university with small budget.

C-CE9.6a

(C-CE9.6a) Provide details of your organization's low-carbon investments for cement production activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Low clinker cement	Please select	Please select		Thanks to its mineral additive content, a patented product named as CEM PLUS+ has been obtained from the Turkish Patent Institute for our cement product that reduces its carbon footprint. It is produced in our Balıkesir, Ankara and Kilis factories and is used in high concrete class products. With the CEM Plus(+) product, the clinker usage rate is reduced by 5%.
Alternative low-CO2 cements/binders	Please select	Please select		Studies are carried out to evaluate the usability of fly ash, bottom ash and synthetic gypsum obtained from thermal power plants by cement manufacturers with an effective quality management process in R&D activities. Limak Cement's two products that allow it to be used as additives in cement were certified by the European Technical Assessment Agency (EOTA) in 2019, for the first time in our country and in member countries, with European Evaluation Certificates (ETA). of the European Union. For the Kilis power plant, the studies on the bottom ash of the thermal power plants in the nearby location have been completed and the ETA certificate was obtained in the second half of 2020.
Alternative low-CO2 cements/binders	Please select	Please select		Limak Cement Anka Branch from the building materials sector was selected for the Preliminary Evaluation Support Project of the Turkish Circular Economy Platform, implemented by the Sustainable Development Association (SKD), of which we are a member, in cooperation with the EBRD. With the project, it is aimed to raise awareness about the circular economy and to determine the priority areas of opportunity related to the circular economy by considering the processes, input outputs and value chains of the companies, primarily by looking at material exchanges (industrial symbiosis).
Carbon capture, utilization and storage (CCUS)	Please select	Please select		Limak Çimento supports the "Low-Carbon Pathways for Industrial CO2 Utilization, Transport, and Storage (LowCarbonPath)" project application under the coordination of the Delft University of Technology in response to the European Commissions' H2020 call "Low carbon industrial production using CCUS". Since the official announcement of the fully adherence on the Sustainability Development by Limak Group, Limak Çimento Sanayi ve Ticaret A.Ş. build its priorities and strategies for sustainability on United Nations Sustainable Development Goals. In this respect, Limak Çimento Sanayi ve Ticaret A.Ş. aims to contribute to the global response to the threat of climate change (SDG13) by being a responsible consumer and producer with an "ecological" economic growth (SDG12) with a strong global partnerships and cooperation (SDG17) under innovation and technological progress for both economic and environmental challenges (SDG9). With the LowCarbonPath Project, Limak Çimento ve Sanayi Ticaret A.Ş. will focuses on how to manage the industrial output of its production under an innovative project enabling us to handle efficiently and economically the technologies related to the elimination of its output. As Low Carbon Path aims to deploy CO2 capture and utilization on Cement Sector, as well as develop a feasible study which can be used to create infrastructure for the transport of this CO2 by pipeline from Limak Anka Cement Plant in Ankara. Limak Cement Group would like to fully support the Low Carbon Path application by taking an active role on the External Advisory Committee of the project by overseeing progress, providing advice regarding the CCUS cluster development and operation, providing data regarding CO2 emissions from CO2-intensive processes taking place in the cement plant and facilitating dialogue between the various stakeholders involved in order to maximize the project's impact. Limak Cement Group will not be only an important stakeholder as operator of essential CO2 transport infrastructure, but also it is expected that the knowledge built up in this project will inform and enable the ongoing CCUS initiatives in Turkey, and more broadly to the eastern European region.
Alternative low-CO2 cements/binders	Please select	Please select		As Limak Cement Group, research studies about the usage of alternative raw materials from the waste and/or by-products of other energy intensive sectors are carried out in all factories. Within the scope of these studies, industrial scale cement production trials have been conducted with the waste of the plastics industry, electric arc furnace slags from the iron and steel industry, sewage sludges of Organized Industrial Zones, waste of marble sector, construction & demolition waste, bottom ash from thermal power plants, and petroleum drilling waste. In this context, utilization of alternative raw materials that give appropriate results is continued, and when appropriate conditions are provided, these products are certified or patented. With the aim of the zero waste approach and carbon emissions reduction, joint cooperation are made with regional Development Agencies to find alternatives for reducing the burnability temperature. Within the short-term plans, it is planned to be an industrial partner in the project consortiums that will take part in the calls of Cluster 5 Climate, Energy and Mobility opened within the scope of Horizon Europe.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/assurance underway

Attach the statement
KURTALAN.pdf
BALIKESİR.pdf
URFA.pdf
ERGANİ.pdf
F11b_Verification_Statement_GHG_LIMAK_2021_v2.pdf
ANKA.pdf
KİLİS.pdf
TRAKYA.pdf

Page/ section reference
All these data were also used to present annual performance of company in Sustainability Report. Both National and International guidelines, protocols (IPCC , 2006, ISO 14064, The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), WBCSD: The Cement CO2and Energy Protocol) were followed to assure and regulate the shared data. The carbon footprint report has been verified by accredited third organizations in accordance with ISO 14064-1:2018 Standards.

Relevant standard
ISO14064-1

Proportion of reported emissions verified (%)
100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach
Scope 2 location-based

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/assurance underway

Attach the statement
F11b_Verification_Statement_GHG_LIMAK_2021_v2.pdf

Page/ section reference
The carbon footprint report has been verified by accredited third organizations in accordance with ISO 14064-1:2018 Standards.

Relevant standard
ISO14064-1

Proportion of reported emissions verified (%)
100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category
Scope 3: Purchased goods and services
Scope 3: Upstream transportation and distribution
Scope 3: Business travel

Verification or assurance cycle in place
Annual process

Status in the current reporting year
Complete

Type of verification or assurance
Third party verification/ assurance underway

Attach the statement
F11b_Verification_Statement_GHG_LIMAK_2021_v2.pdf

Page/section reference
The carbon footprint report has been verified by accredited third organizations in accordance with ISO 14064-1:2018 Standards.

Relevant standard
IS)14064-1

Proportion of reported emissions verified (%)
100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?
No, we do not verify any other climate-related information reported in our CDP disclosure

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?
No, but we anticipate being regulated in the next three years

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

Although there is no valid regulation regarding the carbon pricing in Turkey, we are recording our carbon emission values since 2008. The Paris Climate Agreement and Green Deal Adjustment are the main sources for the determination of carbon pricing mechanism in Turkey. There are two major potential carbon pricing methods which are carbon tax or ETS mechanism for the further strategies of Turkey. Corporate Sustainability and Climate Change department of the Group continuously pursues the current affairs closely in global scale and works on development strategies to achieve low carbon emission, carbon capture, alternative fuel and raw material usage targets since these type of developments could significantly decrease the future carbon costs of the Group.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
No, and we do not currently anticipate doing so in the next two years

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our suppliers
Yes, our customers/clients
Yes, other partners in the value chain

C12.1a

(C12.1a) Provide details of your climate-related supplier engagement strategy.

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Run an engagement campaign to educate suppliers about climate change

% of suppliers by number

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
As given in 2018-2019 Limak Group Sustainability Report, one of the major sustainability targets is creating sustainability consciousness to our whole suppliers.

Impact of engagement, including measures of success

Comment
The percentage of suppliers by number and total procurement spend are not being followed systematically yet but it will be one of our further target to be able to observe the engagement of our suppliers numerically.

Type of engagement
Engagement & incentivization (changing supplier behavior)

Details of engagement
Other, please specify (Supply Chain Management Including Environmental Considerations)

% of suppliers by number

% total procurement spend (direct and indirect)

% of supplier-related Scope 3 emissions as reported in C6.5

Rationale for the coverage of your engagement
In the process of Supplier Selection and Evaluation carried out as part of the Purchasing Procedure, the criteria such as quality, performance, references, certificates and economic criteria are taken into consideration. The approved supplier is added to the list of approved suppliers. The firms which would take place in the List of Approved Suppliers for the first time in their areas of activity need to have sufficient bench capacity, machine park and organization, expertise on their subject matters and have at least 2 years of experience, indicate at least 2 positive references in the similar or same sector in the works that they have undertaken, and have at least one of the necessary quality certifications for the area of activity (TSE, ISO, OHSAS, CE and the like). In the evaluation of the suppliers, the scores given against the criteria are added up. Scoring for the partially achieved items is made according to the percentage of achievement. In order to continue to work with the firms, the firm needs to get at least 50 points out of 100 in the evaluation. If none of the firms is able to pass 50 points out of 100 in the same area of business, the businesses are made with the firm which scored the highest point. Together with the above mentioned items, the sustainability and climate change strategies of the current and potential suppliers became essential criteria since there are significant increase in climate related risks in all around the world. The supplier which a proper environemntal management system such as ISO 14001 and mitigation strategies to decrease its emissions will have advantages during the scoring period of the suppliers. For instance, there is internal transportation companies in all factories to carry the raw materials from quaries to plants. During the selection of supplier for internal transportation, the maintenance and age conditions of vehicles play significant role since the new models and well cared vehicle will cause low carbon emission and less natural source consumptions.

Impact of engagement, including measures of success

Comment

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation	Run a campaign to encourage innovation to reduce climate change impacts

% of customers by number
25

% of customer - related Scope 3 emissions as reported in C6.5

Please explain the rationale for selecting this group of customers and scope of engagement
The Group R&D deparment conducts studies on cement manufacturing techniques with low carbon emission . The CEM PLUS+ which is new developed cement type including more additive and less clinker put on the market to collaborate with the customers to mitigate climate related risk by prefering more environmental fiendly products. This is one of our main strategy to create and improve sustainability consciousness of our custormers and new markets while maintaining our financial development in worldwide.

Impact of engagement, including measures of success

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

Tüpraşh as released an announcement on its participitation to a consortium for the project application within the scope of L*C-SC3-NZE-5-2020: Low carbon industrial production using CCUS*. In the project, it is aimed to combine the carbon dioxide captured from a gas stream with the hydrogen to be produced from a renewable source and then convert it into valuable chemicals by thermocatalytic method.Tüpraş is planning to take part in various work packages, especially the design, installation and operation of the carbon dioxide capture and conversion demo unit, which is aimed to be established in the its Kırıkkale Refinery site.
By 2020, the CCUS project calls target research into possible scenarios that will complete a full circular carbon chain, including carbon capture and conversion, as well as carbon s torage and different uses. In this project, it is planned to create a business plan within the scope of creating a communication network in which organizations from the industry will a lso participate, transporting the carbon dioxicement, steel, paper, etc., which are located around Kırıkkale Refinery and emit CO2de captured from the organizations in this networ k through pipelines and storing it in an appropriate region. Since the mentioned works will be scenario-based, no actual work, installation or construction will be carried out and will not impose a financial obligation or a workload on the organizations participating in the network.
Potential project partners are expected to contribute to the technology to be developed in the project by sharing their technical competencies and opinions in the advisory committe e and sharing some information such as approximate carbon dioxide emission information with the consortium members.
2- Industrial Symbiosis Project (ETI Mining Company - South Marmara Development Agency)
The scope of the project could be defined as use of boron intermediate products and wastes generated as end product of Operations Directorates of the General Directorate of Et i Mining in cement production at Limak Balıkesir Cement Factory, the preparation of a preliminary feasibility report for this industrial symbiosis cooperation and the development of projects and applications for the calls to be made within the scope of the Horizon European Framework Program in order to contribute to the realization of the possibility of symbios is and the introduction of the new product to the market.
The protocol for the dissemination of industrial symbiosis practices in the TR22 Region (Balıkesir-Çanakkale) through the use of boron intermediates and wastes in the cement se ctor was signed by the project partners and the project development studies are still proceeding.
3 -Pre-Assessment Support Project of Turkish Circular Economy Platform (BCSD Turkey - EBRD)
Limak Anka Cement Plant from building materials industry, is elected to Pre-Assessment Support Project of Turkish Circular Economy Platform, launched in collaboration between EBRD and Sustainable Development Society (SDS). Project aims raising awareness on the circular economy and identifying the priority opportunity areas relating to circular econ omy notably looking at the material exchanges (industrial symbiosis) by considering the processes, inputs-outputs and value chains of the companies.
At the end of project, the academic expert on cement sector from Afyon Kocatepe University Civil Engineering Department has presented potential alternative raw material source s (marble residuals, water treatment sludge, moulding sand, construction waste, flouride enrichment plant wastes, diatomite wastes etc.) and available suppliers at the near regio n of the Anka Cement Plant with a final report.
4- Turkish Material Market (TMM) Project (BCSD Turkey - EBRD)
Limak Cement Group participated in the establishment studies on Turkey Material Market system together EBRD and BCSD Turkey. BCSD Turkey is the local network and part ner of World Business Council for Sustainable Development (WBCSD) in Turkey, and it is in a strong cooperation with its parent organization. By joining the Circular Economy Plat form community of Turkey, you will see the main actors (designers, entrepreneurs, industry experts, manufacturers, investors, recyclers, etc.) as well as sectoral associations and public institutions and it makes it easier for you to cooperate in line with the purpose.Limak Cement carried out 10 13 14 EWC coded waste transfer from Polisan company to use in Balıkesir Cement Plant as alternative raw material by using TMM platform

5-) Sustainability Development Association

Works are carried out with the Sustainability Development Association to ensure sustainability within the scope of industrial symbiosis. Purchases for concrete wastes as alternative raw materials have started in our Limak Balıkesir factory.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?
No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate
Yes, we engage directly with policy makers

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?
No, but we plan to have one in the next two years

Attach commitment or position statement(s)
<Not Applicable>

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy
National and international legal requirements, IFC and World Bank norms in order to minimize the environmental impact in all our factories in line with the Corporate Sustainability and Climate Change Department employed within the Limak Cement Group and the Sustainable Development Goals to Take Urgent Action to Combat Climate Change and Its Effects (SKA-13). We are constantly monitored, necessary investments are made for full compliance with all relevant legislation, environmental performances are measured in line with the determined targets and our activities are carried out within the framework of ISO 14001 Environmental Management System. Our Greenhouse Gas Reporting and Verification studies have been reported and verified for direct emissions since 2015 by accredited verifiers within the scope of the roadmap for carbon dioxide emission reduction throughout the Group. As a result of the investments and developments made in our Group's factories in electrical energy consumption, which causes indirect emissions, the best results have been achieved in the world and in Turkey with the current technology. As a matter of fact, in the comparative evaluation study of the Ministry of Energy and Natural Resources, which includes more than 50 integrated factories every year, Limak Cement Factories are at the top. As of the last quarter of 2021, the process of Calculation and Reporting of Greenhouse Gas Emissions and Removal at the Enterprise Level has been initiated and standard trainings have been completed within the framework of the Corporate Carbon Footprint ISO 14064-1:2018 standard throughout the Group. Limak Cement group in Turkey became the first cement factory whose carbon footprint report was approved by an accredited institution in the cement sector. Feasibility studies for a total of 16 MW SPP projects for our Kurtalan, Şanlıurfa and Ergani plants have been completed and approved by the senior management. Projects are planned to start in 2022. Waste feeding system in our Anka factory and shredder investments in our Trakya factory are planned. Waste-derived fuel will be used in the first quarter of 2022 at our Anka factory. Pre-feasibility studies for the 6MW WHR project in our Trakya factory have been completed. In this way, it is aimed to reduce carbon emissions.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate
<Not Applicable>

C12.3a

(C12.3a) On what policy, law, or regulation that may impact the climate has your organization been engaging directly with policy makers in the reporting year?

Focus of policy, law, or regulation that may impact the climate
Mandatory climate-related reporting

Specify the policy, law, or regulation on which your organization is engaging with policy makers
Limak Cement is one of the contributors in the carbon reporting preparations of policy makers. The carbon emission values are recorded and evaluated since 2008 in our factories. The low carbon emission technologies and other carbon mitigations are pursued in global manner. During the meetings with the policy makers, the conducted investigations and improvements are presented to provide an additional perspective for the establishment of most comprehensive and useful carbon reporting system.

Policy, law, or regulation geographic coverage
Global

Country/region the policy, law, or regulation applies to
<Not Applicable>

Your organization's position on the policy, law, or regulation
Support with major exceptions

Description of engagement with policy makers
The current legistative studies are supported with company data and the developing remarks as result reviewing current global applications are presented to the Ministry. The negotiations with the Turkish Cement Manufacturers Association (TCMA) for the legislative studies of policy makers create more feasible application within that scope In 2014, we have signed the United Nations Global Compact, one of the most substantial steps taken by the private sector towards the sustainable development, with the vision of "sustainable and comprehensive global economy" and suggesting universal principles to establish a mutual development culture in the business world in a constant competition as Limak Group of Companies. Since the day of our signatory, we have supported and consolidated 10 principles of the Global Compact in our entire group. In the year of 2015, we have taken the first concrete step of our universal sustainability practices by signing the Women 's Empowerment Principles, created in cooperation with the UN Global Compact and the UN Gender Equality and Women's Empowerment Unit (UN Women), in order to empower women in society, business life and economic life as Limak Group of Companies.

Details of exceptions (if applicable) and your organization's proposed alternative approach to the policy, law or regulation
Limak Cement is one of the contributors in the carbon reporting preparations of policy makers. The carbon emission values are recorded and evaluated since 2008 in our factories. The low carbon emission technologies and other carbon mitigations are pursued in global manner. During the meetings with the policy makers, the conducted investigations and improvements are presented to provide an additional perspective for the establishment of most comprehensive and useful carbon reporting system. Together with the sharing of current site practices, theoritical content of the mentioned guidelines and regulations is aimed to be more realistic and feasible for the site practices.

Have you evaluated whether your organization's engagement is aligned with the goals of the Paris Agreement?
Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication
Other, please specify (Accredited third organization)

Status
Complete

Attach the document
F11b_Verification_Statement_GHG_LIMAK_2021_v2.pdf

Page/Section reference
The carbon footprint report has been prepared by Limak Cement Group and verified by accredited third organizations in accordance with ISO 14064-1:2018 Standards. All pages have information about our carbon emission process.

Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

Comment

Publication
In voluntary sustainability report

Status
Underway – previous year attached

Attach the document
LimakSustainabilityReport20182019.pdf

Page/Section reference
From Page 62 to 79, the all sustainability strategies and related emissiom datas of Limak Cement Group are shared.

Content elements
Governance
Risks & opportunities
Emissions figures
Emission targets

Comment
Limak releases one Sustainability Report for all group of companies every two years. These companies share their data and strategies with Limak corporate office and they integrated them to Sustainability Report. In Limak Group of Companies, monitoring all sustainability activities and performance, determining the performance indicators required to monitor this performance, performance and practices within the scope of sustainability priorities . The sustainability management, which we call" Limak Sustainability Leadership", consists of the" Sustainability Governance Platform" with representatives from all our companies under the leadership of Chairperson and the related target committees and support office. Sustainability Governance Platform will provide instantenous availability to collected sustainability data from whole group of companies. Limak Group of Companies publishes the sustainability report biennially.

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	As the Limak cement group, we believe that the protection of biodiversity and other forces of natural capital is a global issue that requires collaborative solutions on a large scale. Within the scope of combating climate change, the importance of many ecosystems such as forests is increasing day by day due to their carbon sink capacities and natural flood defenses. Applicable site-specific Recovery to Nature plans, developed and used by the site management team, are being prepared to preserve and improve the biodiversity value during the operation and post-closure phases of the quarries in our factories, to identify risks and opportunities before extraction begins. It determines and implements the scope of activities for monitoring and improving the environmental impacts on biodiversity and ecosystem with the risk and opportunity assessment studies it has carried out for factory and quarry regions. Process criteria and sustainability targets have been determined by the sustainability and climate change unit at our plants. In order to protect and maintain biodiversity in our factory and quarry areas, the most up-to-date, preventive, reductive and corrective activities are prepared by the sustainability and climate change directorate of the group and adapted for all activities carried out within the group.	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	No, but we plan to do so within the next 2 years	<Not Applicable>	<Not Applicable>

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	No, but we plan to assess biodiversity-related impacts within the next two years	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Education & awareness Other, please specify (In our factories, plans for reintroducing nature are being developed.)

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	State and benefit indicators Pressure indicators Response indicators

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Chief Executive Officier	Chief Executive Officer (CEO)

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms